

June 26, 1931

8: P.M.

Dear Charlie,

I was very much disappointed that you feel you can't go in with me on the paper. The reasons you gave I do not think are strong enough. I would be glad if you would change your mind. I don't want to force you, so you do as you please. I shall go ahead now but can insert any changes or additions later if you will come in with me. I saw Robbins of the National Research Council. He said the joint authorship need not hold up the paper so that reason is dispensed with. You can let me know any time soon.

Have been a bit upset about the counts on #7 for gl. I had 4 plants in the neighborhood last. Two produced miserable ear where kernels adhered to perianth. The other 2 produced fair ears but the kernels & one ear germinated badly. The counts are as follows: gl. gl. gl. ♂ =

1 ear = 50%: 9 or an approximation to a 1:10 ratio
I shall wait the results from the other ear (only a few plants)

in a day or so. It looks as if #7 might be $\text{gl}_1 - \nu_5$ - at least.
I shall get plenty of counts this fall. It's just bad luck now.
If it is as then your counts last fall are significant.
The part of #7 which contains gl_1 , there is not the part that
makes the two zones character. The interchanging region in D_3
could be worked using the knot & the arm which carries $\text{gl}_1 - \nu_5$
could be located. The data, of course, are too small but just too
suspicious.

I have not worked on #2 until I can work on #5. If #8 is not so then I can work there Blackie materials
to pick out the two zones. It will save time in the end to eliminate
#5. It will be crossed to you this summer. Will you cross it to
Chocolate perhaps?

Am pleased that you will be at Cal. Tech. next year -
real pleasure. We ought to have a lively long time.

Concerning my work - At present I am working on
some of Stakler's X-ray material. I have seen a number of the effects
X-ray on metabolic rates as measured by mitotic appearance with
the following method. After ~~the~~ mitosis the 2nd nuclei contain
a metabolic stage. This lasts from 7-9 days & then the 1st division

of the meiosis occurs. Using Ruth's idea I can see what changes have occurred by an analysis of the 1st division when the spores have been treated after meiosis. It is the 1st division after the laying. Have gotten some interesting results - not unusual but I haven't gone far enough. That is for the early work. Will work on deficiencies when this material comes along in the field. We want to see why so-called recovery occurs - type of deficiency, locations of deficiency with reference to the etc. I have some ideas but they are too uncheckered as yet to even discuss them. I do not wish to attack the problem from this general way as I think we will find little more. Will let you know any new developments as soon as I have any worth writing about.

My work for Cal-Tech. will depend a great deal on what happens this summer. I know, finishing up tissues is essential. Problem work will continue. I have several new ideas I wish to push. I wish that I believe that the reason there is an taking out during diplotenia is because the ~~chromosomes~~ chromosomes are pulled apart & not repelled.

This pulling takes place independently at different regions of the chromosome but is never initiated at the insertion region which is passively pulled apart as the cell continues on its way and the chromatids. This pulling gives the chromosomes at diakinesis their caterpillar-like appearance. More about that when I see you.

Another point I may want to pull is the relation of the so-called matrix to the nucleolus. I think the nucleolus is the matrix & that it distributes the chromatin in Diaphase. Have some suggestive evidence.

I am going to work on crossing over bands. I already feel certain I have proof that this occurs in Diaphase but I need good photographs & wider study.

Likewise, I hope to work on synapsis. Have some new material & a feeling that there is some variation.

There are several special problems with telosomes. I think I have written you about some. - i.e., the relation of synapsis to nucleolar formation & its location.

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With closing over. I am sorry not to be able to talk over all of
this it seems so unsatisfactory by letters. Will see you
in a few months anyway.

Here's hoping you change your mind about the
paper if you would like to. Except for the risk involved
every little bit helps!

I sincerely,

Frank.

My arm sticks to the table (it is so warm) that I push
the pen with difficulty - excuse the scrawl. It has been
very hot & no rain. Many of my plants have died.
Fair climate!